

**What is claimed is:**

1        1. An apparatus for detecting an external optical  
2 disk drive's open/closed status, comprising:  
3            an upper housing;  
4            a cover, disposed above the upper housing, wherein a  
5                convex portion is disposed at the front edge of  
6                cover with a hook hole therein;  
7            a solenoid valve sub-assembly, fixed under the  
8                bottom face of the upper housing;  
9            a solenoid valve base, comprising a body, a  
10               connection part disposed on a side of the body,  
11               and a spring support disposed on the other side  
12               of the body, wherein a space is located between  
13               the connection part and the spring support;  
14            a solenoid valve, fixed at the bottom of the  
15               solenoid valve base;  
16            a hook device, engaged with the connection part of  
17               the solenoid valve base;  
18            a torsion spring, disposed at the spring support of  
19               . the solenoid valve base;  
20            an elastic plate, disposed within the space of the  
21               solenoid valve base;  
22            a lower housing, with a motherboard disposed  
23               thereon, combined in assembly with the upper  
24               housing, to contain and protect the motherboard  
25               and the solenoid sub-assembly therein; and  
26            two wires, wherein one end of each wire is connected  
27               to the torsion spring and the elastic plate

28                   respectively, and the other end is electrically  
29                   connected to the motherboard;  
30                   wherein, when the cover is closed, the convex  
31                   portion located at the front edge of the cover  
32                   presses on the torsion spring, and the torsion  
33                   spring contacts the elastic plate, resulting in  
34                   an electrically conductive state; when the  
35                   cover is opened, the torsion spring is  
36                   released, and the torsion spring disengages  
37                   from the elastic plate, disconnecting the  
38                   circuit.

1                 2. The apparatus for detecting an external optical  
2                 disk drive's open/closed status of claim 1, further  
3                 comprising a hinge, disposed at the back edge of the  
4                 upper housing.

1                 3. The apparatus for detecting an external optical  
2                 disk drive's open/closed status of claim 2, wherein the  
3                 cover pivots on the hinge of the upper housing to open  
4                 and close.

1                 4. The apparatus for detecting an external optical  
2                 disk drive's open/closed status of claim 1, wherein the  
3                 solenoid valve further comprises a retractable shaft.

5                 5. The apparatus for detecting an external optical  
               disk drive's open/closed status of claim 4, wherein the  
               hook device includes a shaft, a leg, and a hook, and the  
               shaft is hinged at the connection part of the solenoid  
               valve base, and the leg is engaged with the retractable  
               shaft of the solenoid valve.